

# Driven Spin Coherent Precession at RHIC

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# Introduction

- AC dipole tune is:

$$f_d = \frac{NCO}{2^{25}} = \frac{NCO}{33554432}$$

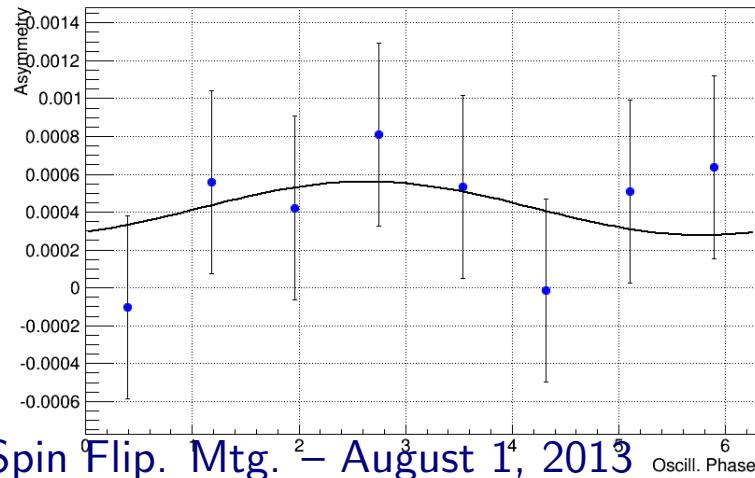
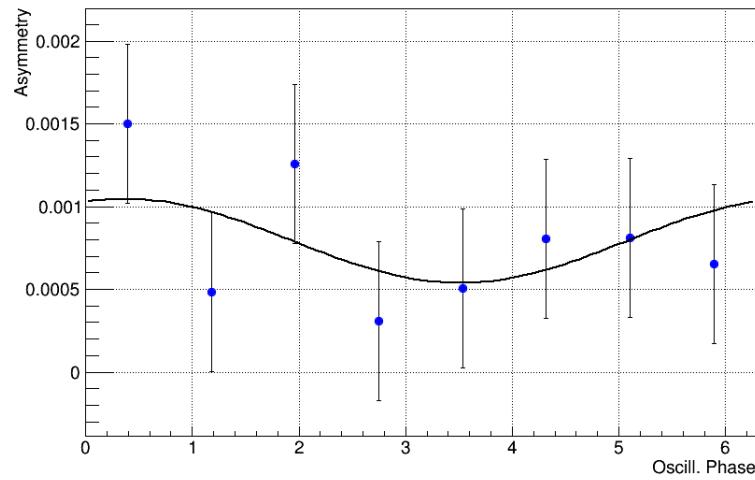
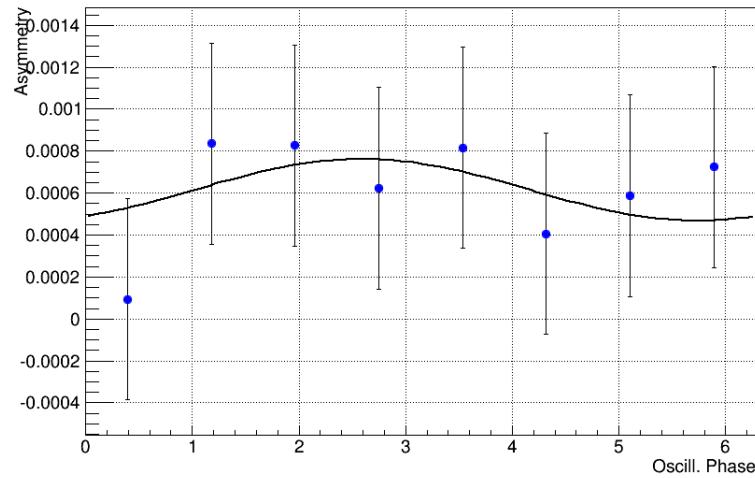
- Phase of individual measurement data set is calculated using the known “time” at the beginning of the data set

$$\phi = 2\pi f_d N_s$$

- Phase correction  $\Delta\phi = \phi_i - \phi_j$  is used to bring the individual measurements ( $i$  and  $j$ ) back into phase
- $\phi_{\text{comb}} = \phi_{\text{meas}} - \Delta\phi$

$$f_d \approx 0.493$$

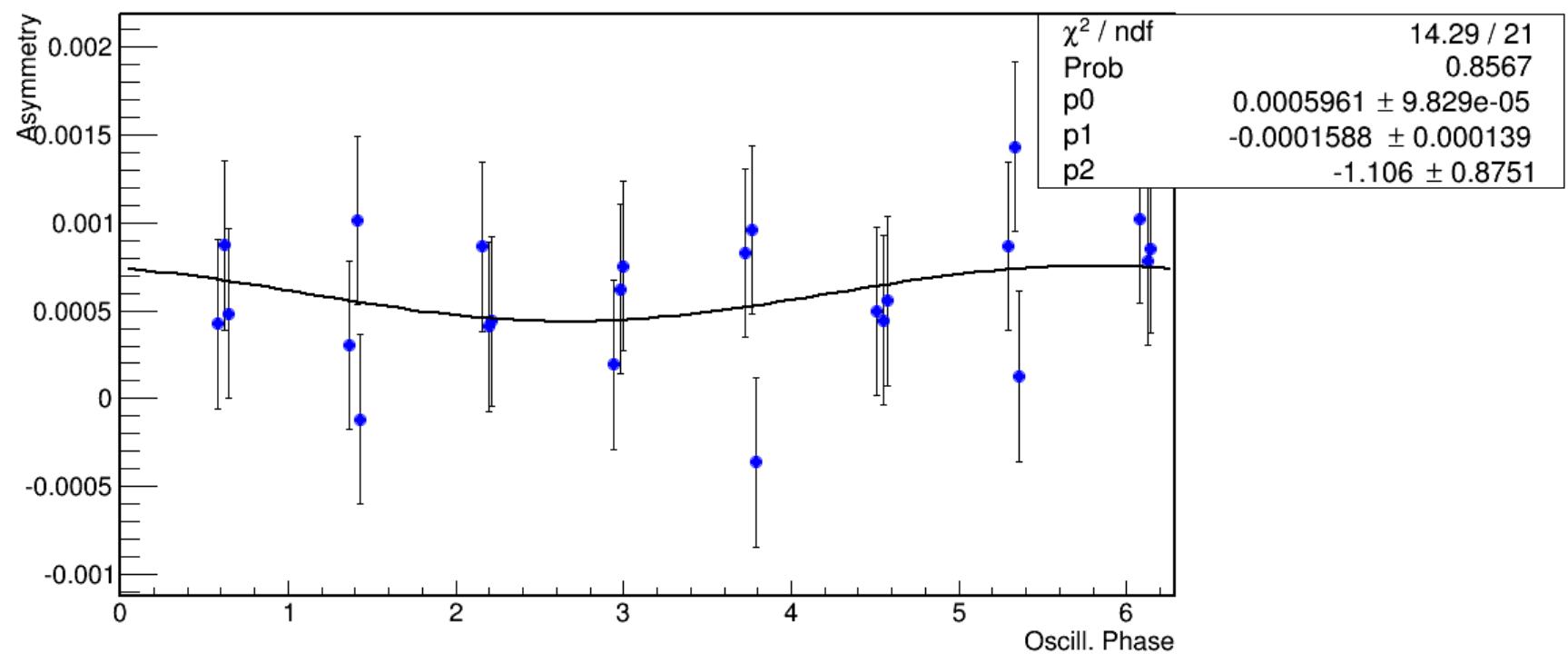
17597.006: Recorded Fri Jun 7 13:17:33 2013, Analyzed Thu Jun 27 11:48:01 2013, Version 2065:2066, dsmirnov



- p-Carbon measurements:  
17597.006  
17597.007  
17597.008

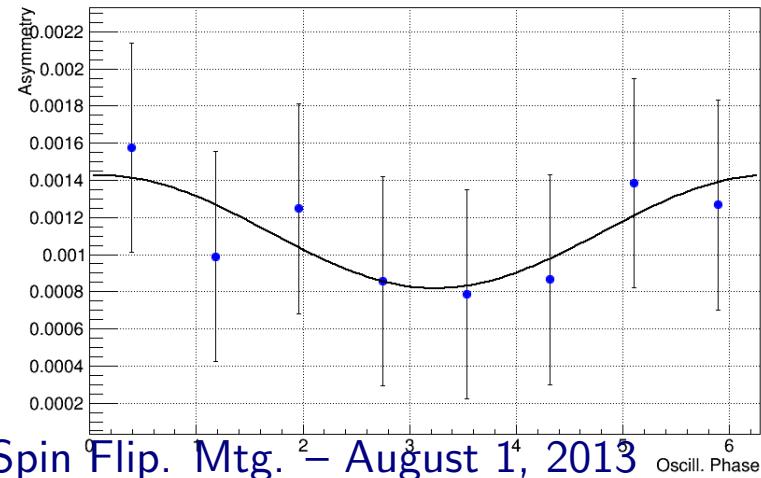
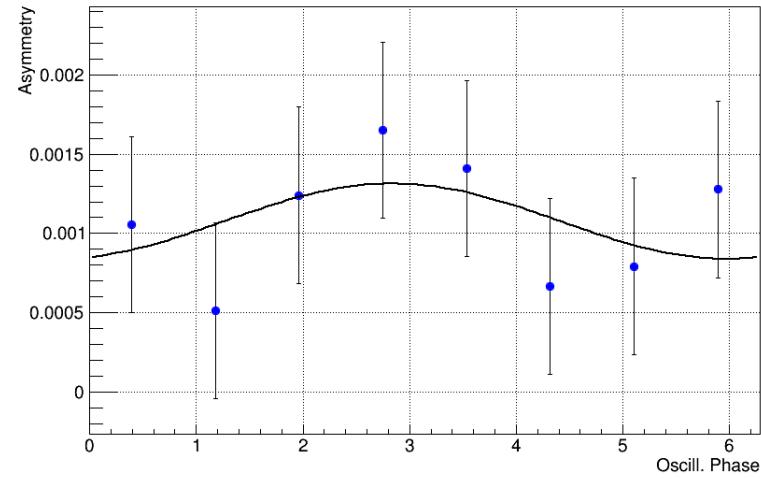
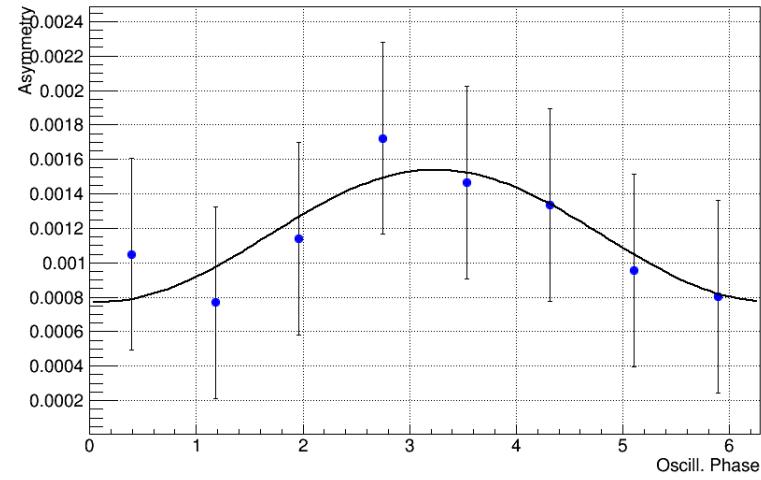
- $N_d = 16542335$
- $f_d = \frac{N_d}{33554432}$

# $f_d \approx 0.493$ . Combination



$f_d \approx 0.490$ 

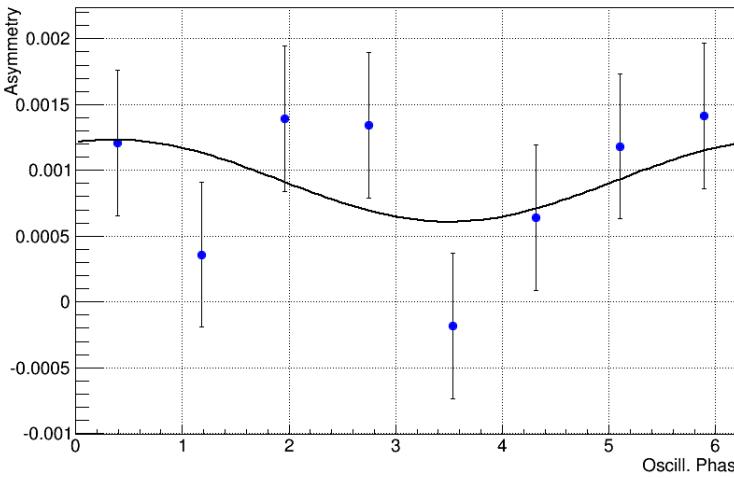
17599.003: Recorded Fri Jun 7 15:33:27 2013, Analyzed Thu Aug 1 12:05:38 2013, Version 2125, dsmirnov



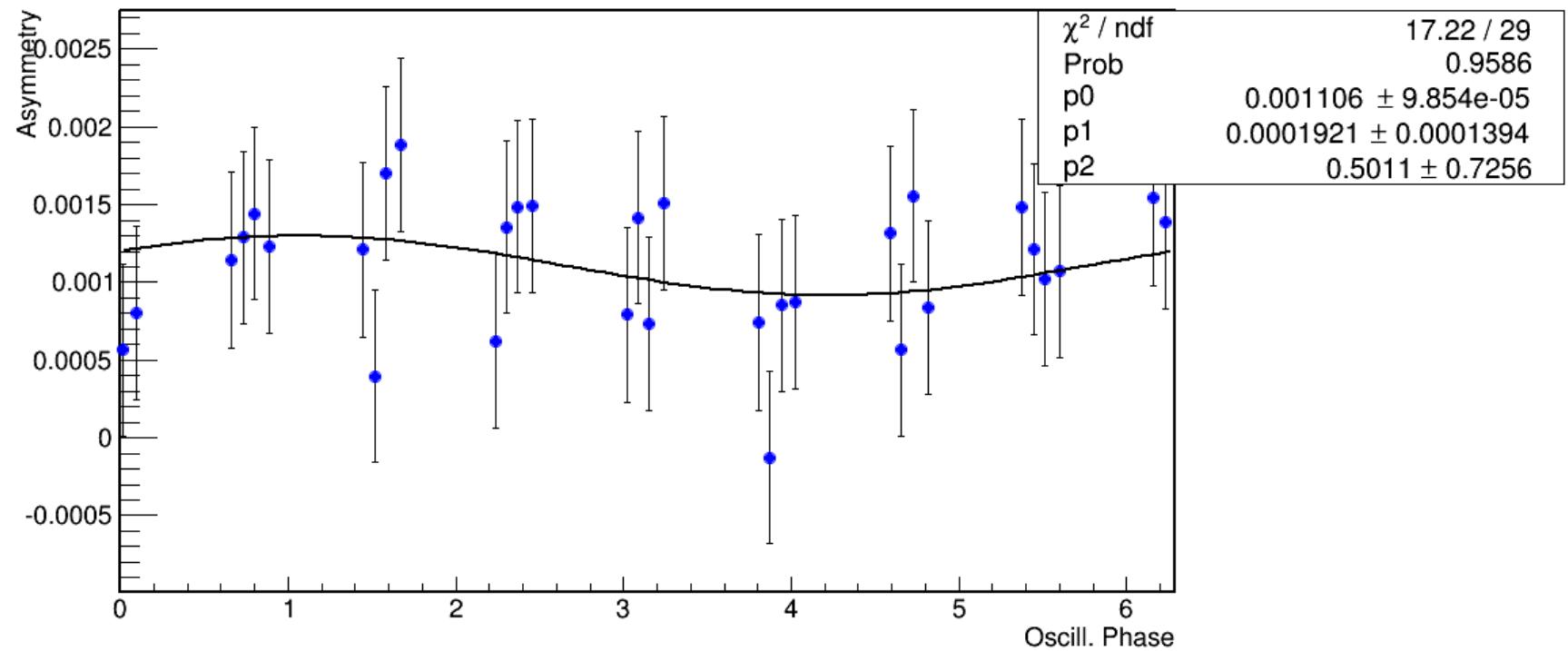
- p-Carbon measurements:  
17599.002  
17599.003  
17599.004  
17599.005

- $N_d = 16441672$
- $f_d = \frac{N_d}{33554432}$

17599.002: Recorded Fri Jun 7 15:30:53 2013, Analyzed Thu Aug 1 12:05:51 2013, Version 2125, dsmirnov

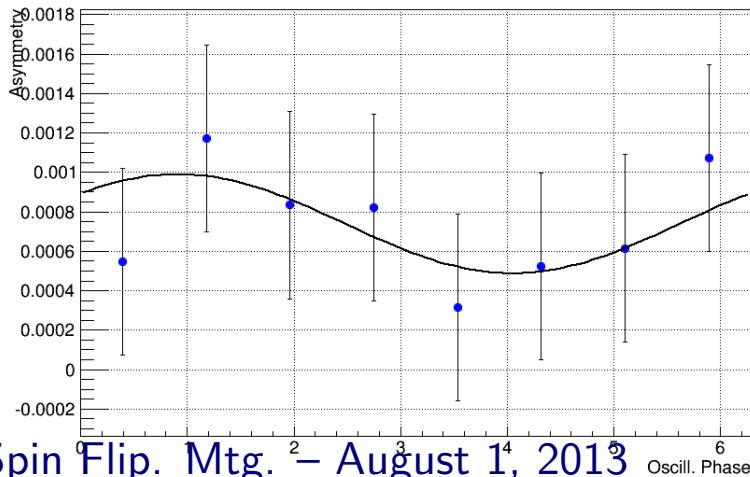
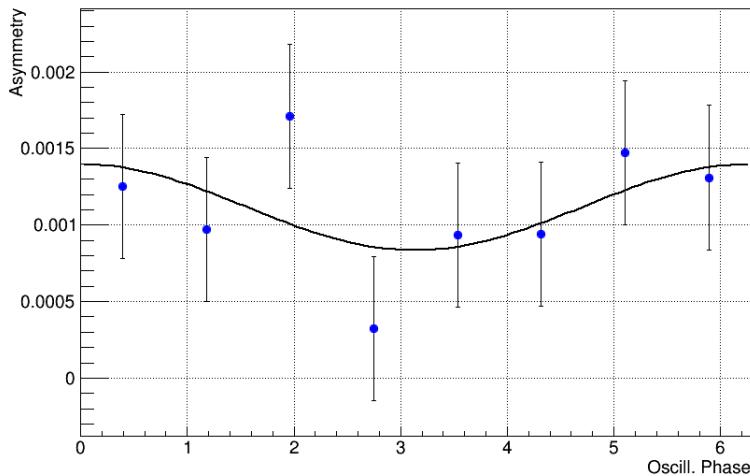
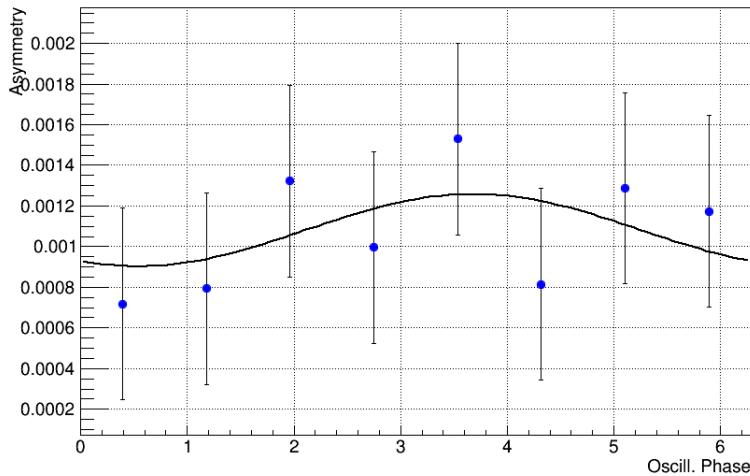


# $f_d \approx 0.490$ . Combination



$f_d \approx 0.490$ 

17597.003: Recorded Fri Jun 7 13:02:35 2013, Analyzed Thu Jun 27 11:05:50 2013, Version 2065:2066, dsmirnov



- p-Carbon measurements:  
17597.003  
17597.004  
17597.005

- $N_d = 16441672$
- $f_d = \frac{N_d}{33554432}$

# $f_d \approx 0.490$ . Combination

